



INVESTIGATOR'S ANNUAL REPORT

United States Department of the Interior
National Park Service

All or some of the information you provide may become available to the public.

OMB # (1024-0236)
Exp. Date (11/30/2010)
Form No. (10-226)

Reporting Year: 2009	Park: Shenandoah NP	Select the type of permit this report addresses: Scientific Study	
Name of principal investigator or responsible official: Stephan De Wekker		Office Phone: 434-924-3324	
Mailing address: University of Virginia Department of Environmental Sciences 291 McCormick Rd. P.O. Box 400123 Charlottesville, VA 22904 USA		Office FAX Office Email dewekker@virginia.edu	
Additional investigators or key field assistants (first name, last name, office phone, office email) Name: Temple Lee Phone: Email: trl2y@virginia.edu			
Project Title (maximum 300 characters): Monitoring atmospheric carbon dioxide and aerosol layer heights in the Shenandoah National Park			
Park-assigned Study or Activity #: SHEN-00346	Park-assigned Permit #: SHEN-2008-SCI-0001	Permit Start Date: Jan 22, 2008	Permit Expiration Date: Dec 31, 2012
Scientific Study Starting Date: Feb 01, 2008		Estimated Scientific Study Ending Date: Dec 31, 2012	
For either a Scientific Study or a Science Education Activity, the status is: Continuing		For a Scientific Study that is completed, please check each of the following that applies: <input type="checkbox"/> A final report has been provided to the park or will be provided to the park within the next two years <input type="checkbox"/> Copies of field notes, data files, photos, or other study records, as agreed, have been provided to the park <input type="checkbox"/> All collected and retained specimens have been cataloged into the NPS catalog system and NPS has processed loan agreements as needed	
Activity Type: Research			
Subject/Discipline: Air Quality			

Purpose of Scientific Study or Science Education Activity during the reporting year (maximum 4000 characters): Investigating the meteorological factors affecting trace gas variability at a mountain ridge location in the Shenandoah National Park
Findings and status of Scientific Study or accomplishments of Science Education Activity during the reporting year (maximum 4000 characters): A 17-meter tall tower at the pinnacles research station was instrumented with meteorological sensors in Spring 2008. Meteorological data collection started in Summer 2008 and has continued in the current reporting year. CO and CO2 data collection has also continued.

in addition to the continuous measurements, we have conducted several small-scale meteorological field campaigns at the research station and at the SNP Headquarters in Luray during the reporting year. The field campaigns involved the launch of weather balloons and the deployment of radar wind profilers, aerosol lidars, and turbulence sensors. Luray high school students and undergraduate and graduate students participated in the field study. The data obtained during these field campaigns are currently being analyzed.

For Scientific Studies (not Science Education Activities), were any specimens collected and removed from the park but not destroyed during analysis?

No

Funding specifically used in this park this reporting year that was provided by NPS (enter dollar amount):

\$0

Funding specifically used in this park this reporting year that was provided by all other sources (enter dollar amount):

\$0

List any other U.S. Government Agencies supporting this study or activity and the funding each provided this reporting year:

Paperwork Reduction Act Statement: A federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Public reporting for this collection of information is estimated to average 1.625 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms. Direct comments regarding this burden estimate or any aspect of this form to Dr. John G. Dennis, Natural Resources (3127 MIB), National Park Service, 1849 C Street, N.W., Washington, DC 20240.